

Notice of Allowability

Application No.

10/769,387

Applicant(s)

LEE ET AL.

Examiner

Mitchell R. Slavitt

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 1/31/04.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☒ The drawings filed on 31 January 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 1/31/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Reasons for Allowance

1. Claims 1-11 are allowed as the prior art does not teach or suggest the applicant's invention. Independent claim 1 teaches a method of writing product servo sectors to a disk comprising the steps of:

(a) inserting a head positioning pin of an external spiral servo writer into the HAD, the head positioning pin for engaging the actuator arm:

(b) using the external spiral servo writer to derive a radial location of the head;

(c) actuating the head positioning pin in response to the radial location of the head in a closed loop system to rotate the actuator arm about the pivot in order to position the head radially over the disk while:

writing a plurality of reference servo sectors in a substantially circular reference path, each reference servo sector comprising a sync mark and a plurality of servo bursts; and

writing a plurality of spiral tracks, each spiral track comprising a high frequency signal interrupted at a predetermined interval by a sync mark;

(d) removing the head positioning pin from the HAD

(e) synchronizing a servo write clock by:

using the head internal to the disk drive to read the servo bursts in the reference servo sectors to generate a position error signal used to maintain the head along the circular reference path;

using the head internal to the disk drive to read the sync marks in the reference servo sectors to generate a reference sync mark detect signal; and

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synchronizing the servo write clock in response to the reference sync mark detect signal; and

(f) writing the product servo sectors to the disk to define a plurality of radially spaced, concentric data tracks by:

using the head internal to the disk drive to read the high frequency signal in the spiral tracks to generate a position error signal used to maintain the head along a substantially circular target path;

using the head internal to the disk drive to read the sync marks in the spiral tracks to generate a spiral sync mark detect signal;

maintaining synchronization of the servo write clock in response to the spiral sync mark detect signal; and

using the servo write clock and the head internal to the disk drive to write the product servo sectors along the circular target path.

Independent claim 11 teaches a disk drive comprising control circuitry and a disk assembly. A disk comprises:

(a) a plurality of reference servo sectors in a substantially circular reference path, each reference servo sector comprising a sync mark and a plurality of servo bursts, the servo bursts for maintaining the head along the circular reference path while reading the sync marks in the reference servo sectors to generate a reference sync mark detect signal for use in synchronizing a servo write clock;

(b) a plurality of spiral tracks, each spiral track comprising a high frequency signal interrupted at a predetermined interval by a sync mark, the high

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frequency signal for maintaining the head along a circular target path while reading the sync marks in the spiral tracks to generate a spiral sync mark detect signal for use in maintaining synchronization of the servo write cloak; and

(c) a plurality of product servo sectors written using the servo write clock, the product servo sectors defining a plurality of radially spaced, concentric tracks.

Conclusion


2. inquiry concerning this communication or earlier communications from the examiner should be directed to Mitchell R. Slavitt whose telephone number is (571) 272-7562. The examiner can normally be reached on M-F (6:30-4:00), 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MS m/s
6/23/05


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600